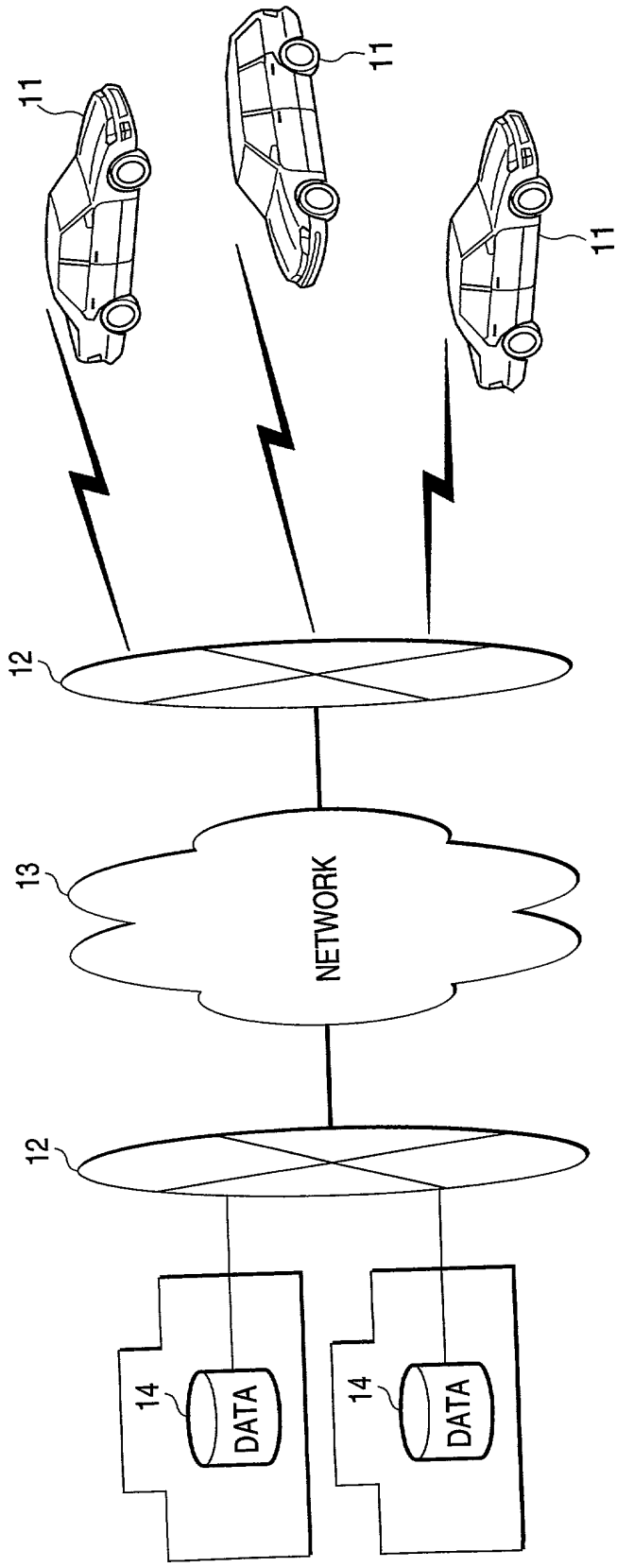


FIG. 1

FIG. 2

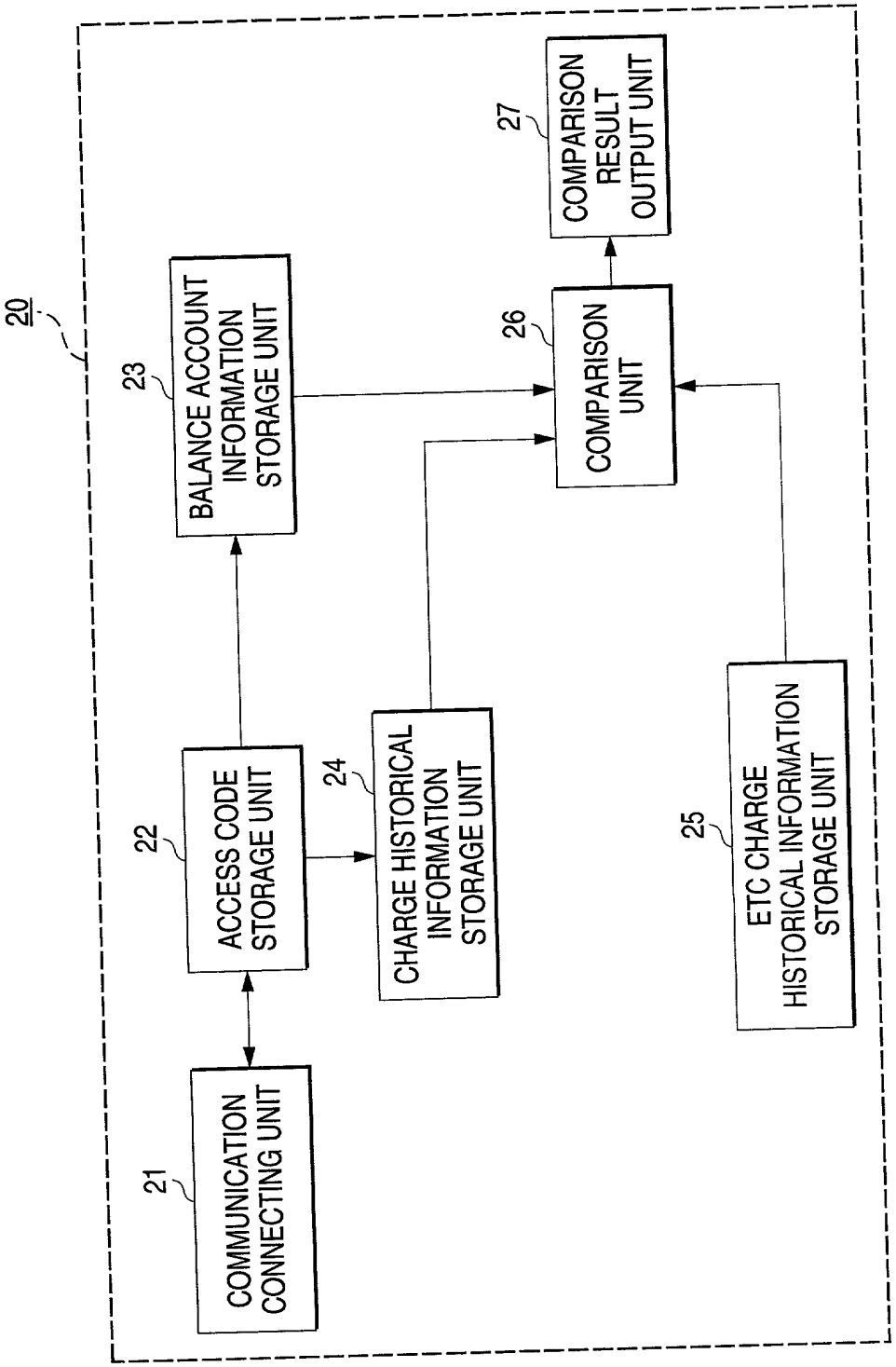
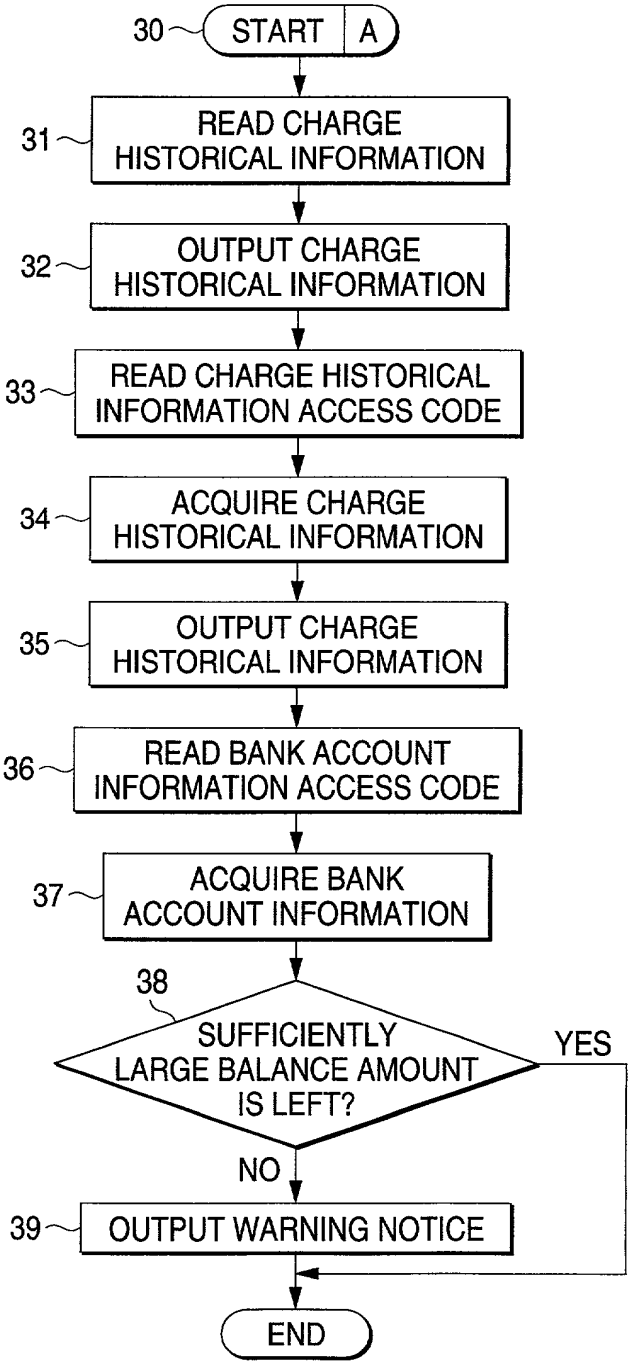
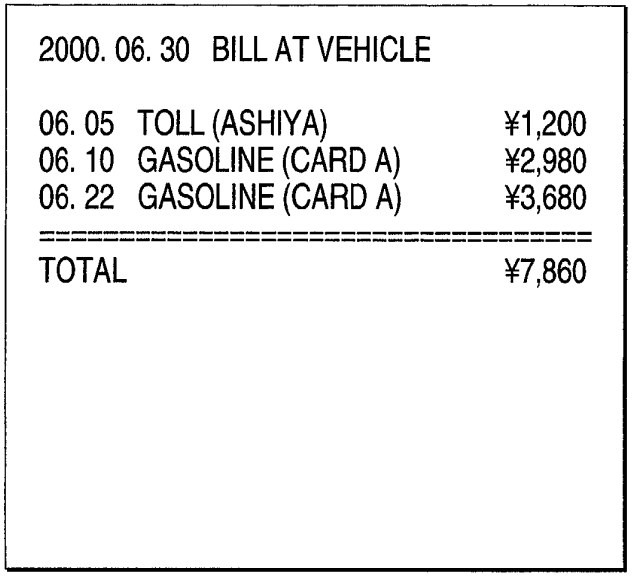

20
COMMUNICATION CONNECTING UNIT
21
ACCESS CODE STORAGE UNIT
22
CHARGE HISTORICAL INFORMATION STORAGE UNIT
24
ETC CHARGE HISTORICAL INFORMATION STORAGE UNIT
25
BALANCE ACCOUNT INFORMATION STORAGE UNIT
23
COMPARISON UNIT
26
COMPARISON RESULT OUTPUT UNIT
27

FIG. 3


30
START
A
31
READ CHARGE HISTORICAL INFORMATION
32
OUTPUT CHARGE HISTORICAL INFORMATION
33
READ CHARGE HISTORICAL INFORMATION ACCESS CODE
34
ACQUIRE CHARGE HISTORICAL INFORMATION
35
OUTPUT CHARGE HISTORICAL INFORMATION
36
READ BANK ACCOUNT INFORMATION ACCESS CODE
37
ACQUIRE BANK ACCOUNT INFORMATION
38
SUFFICIENTLY LARGE BALANCE AMOUNT IS LEFT?
YES
NO
39
OUTPUT WARNING NOTICE
END

Translation Solutions

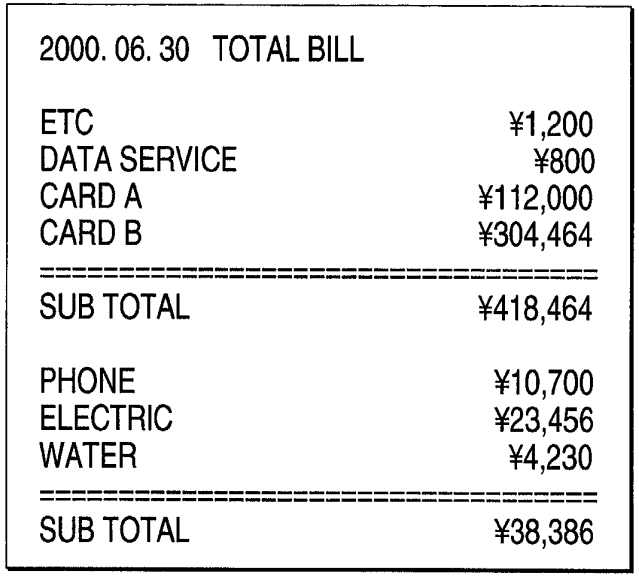
FIG. 4A



2000. 06. 30 BILL AT VEHICLE

06. 05	TOLL (ASHIYA)	¥1,200
06. 10	GASOLINE (CARD A)	¥2,980
06. 22	GASOLINE (CARD A)	¥3,680
TOTAL		¥7,860

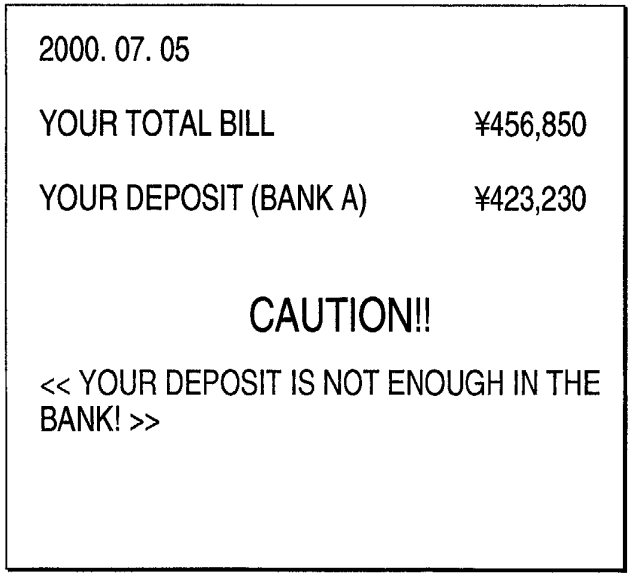
FIG. 4B



2000. 06. 30 TOTAL BILL

ETC	¥1,200
DATA SERVICE	¥800
CARD A	¥112,000
CARD B	¥304,464
SUB TOTAL	¥418,464
PHONE	¥10,700
ELECTRIC	¥23,456
WATER	¥4,230
SUB TOTAL	¥38,386

FIG. 4C



2000. 07. 05

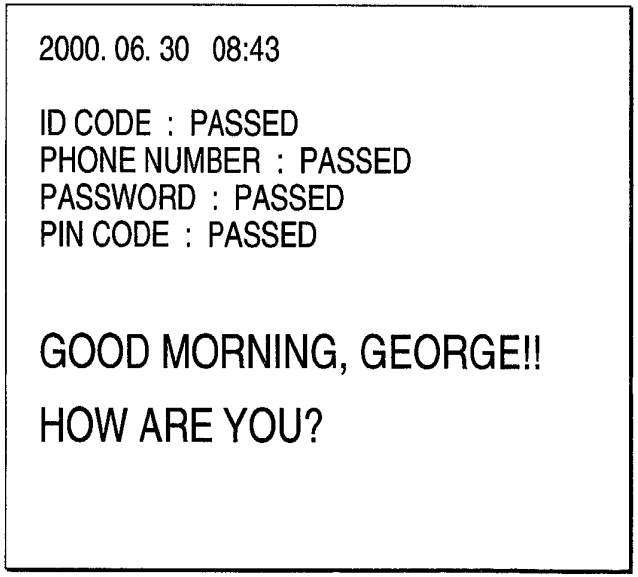
YOUR TOTAL BILL ¥456,850

YOUR DEPOSIT (BANK A) ¥423,230

CAUTION!!

<< YOUR DEPOSIT IS NOT ENOUGH IN THE BANK! >>

FIG. 4D



2000. 06. 30 08:43

ID CODE : PASSED
PHONE NUMBER : PASSED
PASSWORD : PASSED
PIN CODE : PASSED

GOOD MORNING, GEORGE!!

HOW ARE YOU?

MATSUTANI
INFORMATION TERMINAL APPARATUS
Filed: April 23, 2001
Darryl Mexic
4 of 21
Q63352
(202) 293-7060

FIG. 5

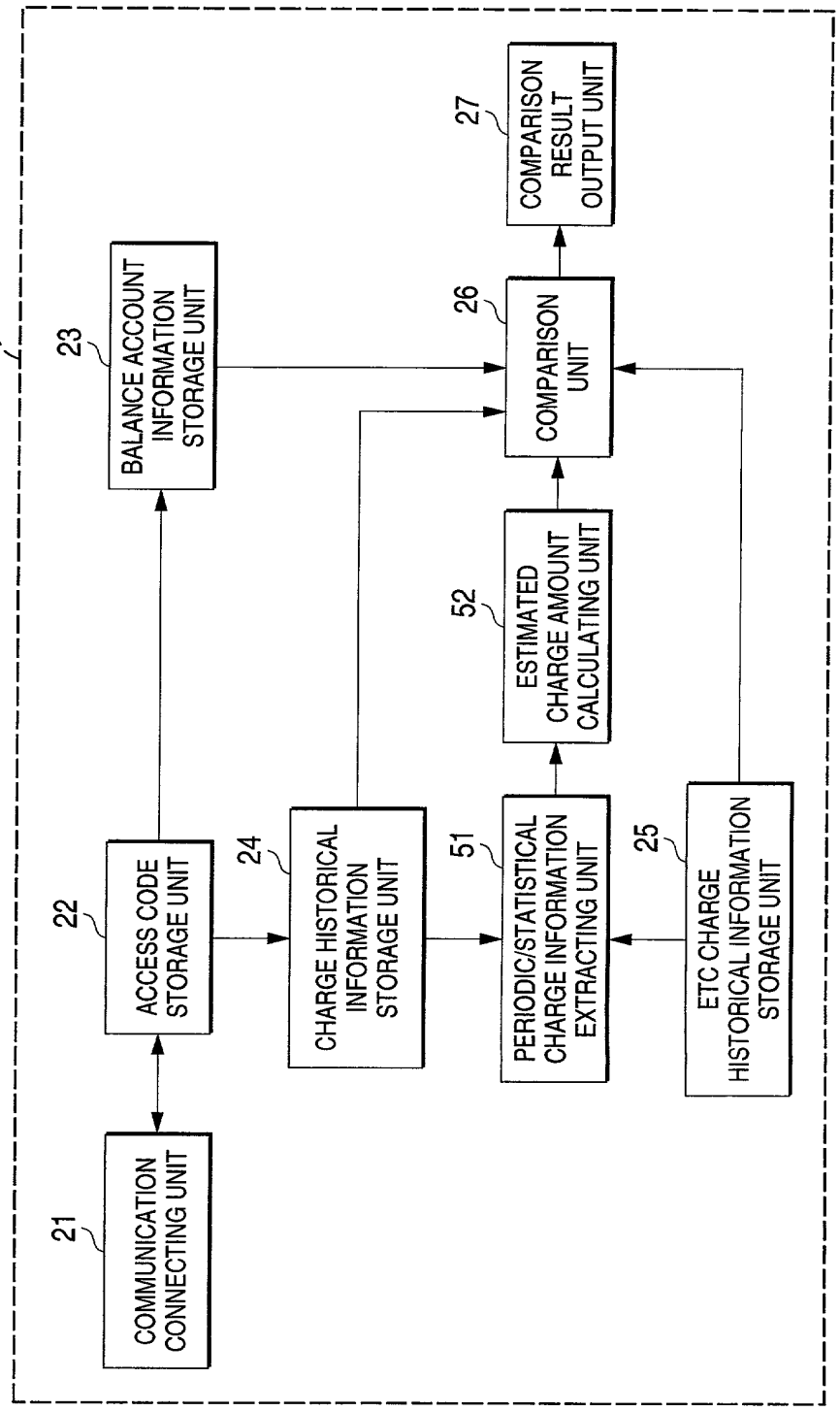

20
21
COMMUNICATION CONNECTING UNIT
22
ACCESS CODE STORAGE UNIT
23
BALANCE ACCOUNT INFORMATION STORAGE UNIT
24
CHARGE HISTORICAL INFORMATION STORAGE UNIT
25
ETC CHARGE HISTORICAL INFORMATION STORAGE UNIT
26
COMPARISON UNIT
27
COMPARISON RESULT OUTPUT UNIT
51
PERIODIC/STATISTICAL CHARGE INFORMATION EXTRACTING UNIT
52
ESTIMATED CHARGE AMOUNT CALCULATING UNIT

FIG. 6

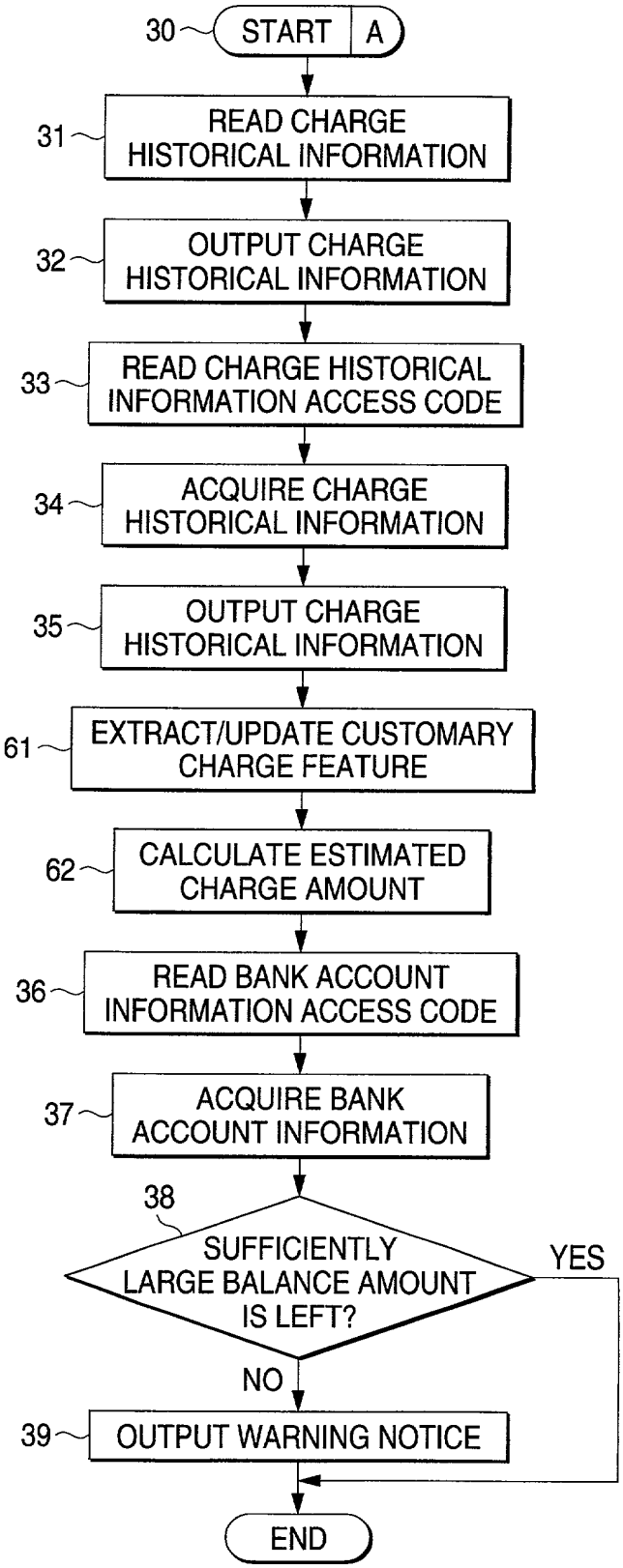

30
START
A
31
READ CHARGE HISTORICAL INFORMATION
32
OUTPUT CHARGE HISTORICAL INFORMATION
33
READ CHARGE HISTORICAL INFORMATION ACCESS CODE
34
ACQUIRE CHARGE HISTORICAL INFORMATION
35
OUTPUT CHARGE HISTORICAL INFORMATION
61
EXTRACT/UPDATE CUSTOMARY CHARGE FEATURE
62
CALCULATE ESTIMATED CHARGE AMOUNT
36
READ BANK ACCOUNT INFORMATION ACCESS CODE
37
ACQUIRE BANK ACCOUNT INFORMATION
38
SUFFICIENTLY LARGE BALANCE AMOUNT IS LEFT?
YES
NO
39
OUTPUT WARNING NOTICE
END

FIG. 7

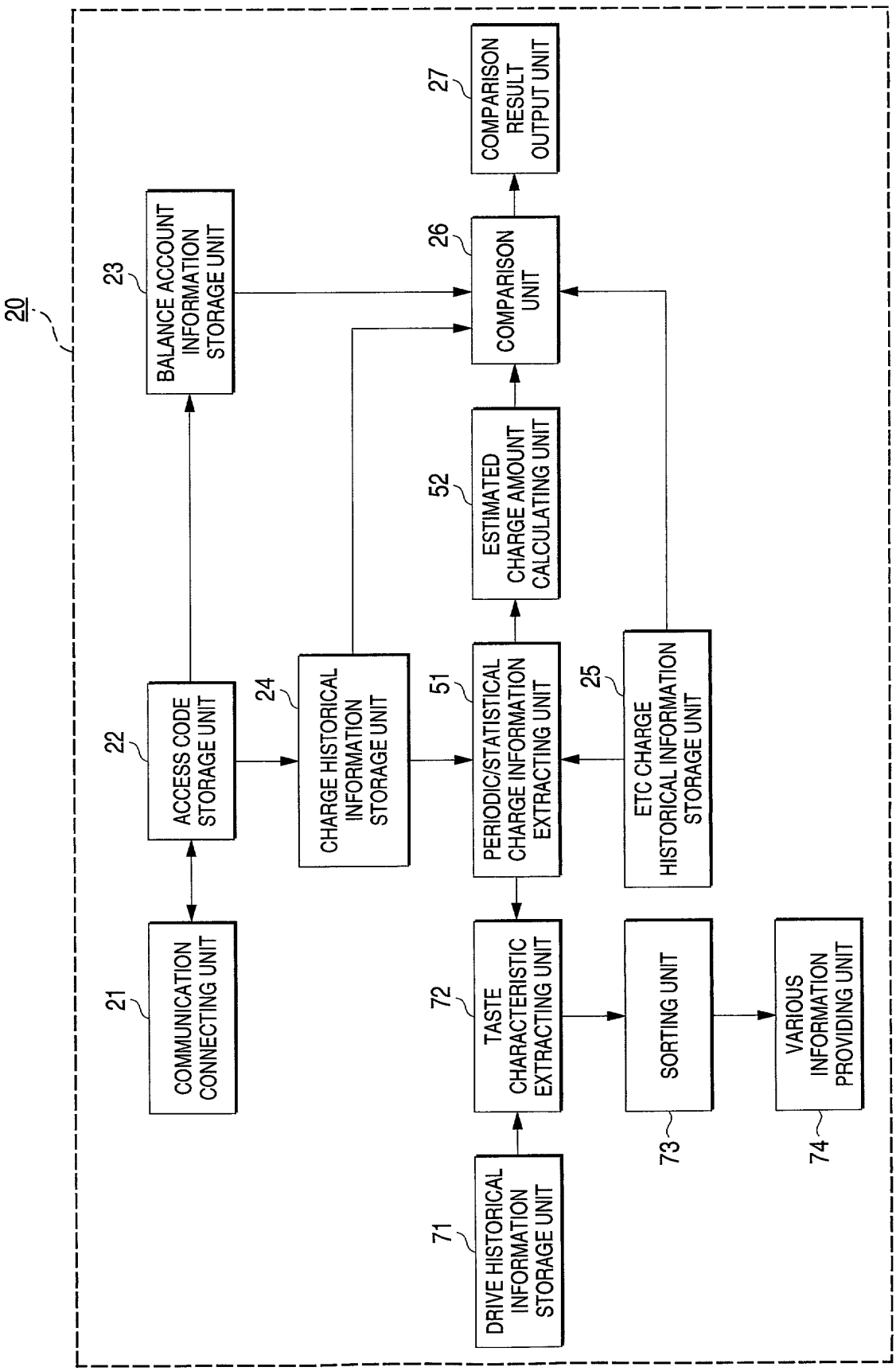

20
21
COMMUNICATION CONNECTING UNIT
22
ACCESS CODE STORAGE UNIT
23
BALANCE ACCOUNT INFORMATION STORAGE UNIT
24
CHARGE HISTORICAL INFORMATION STORAGE UNIT
25
ETC CHARGE HISTORICAL INFORMATION STORAGE UNIT
26
COMPARISON UNIT
27
COMPARISON RESULT OUTPUT UNIT
51
PERIODIC/STATISTICAL CHARGE INFORMATION EXTRACTING UNIT
52
ESTIMATED CHARGE AMOUNT CALCULATING UNIT
71
DRIVE HISTORICAL INFORMATION STORAGE UNIT
72
TASTE CHARACTERISTIC EXTRACTING UNIT
73
SORTING UNIT
74
VARIOUS INFORMATION PROVIDING UNIT

FIG. 8

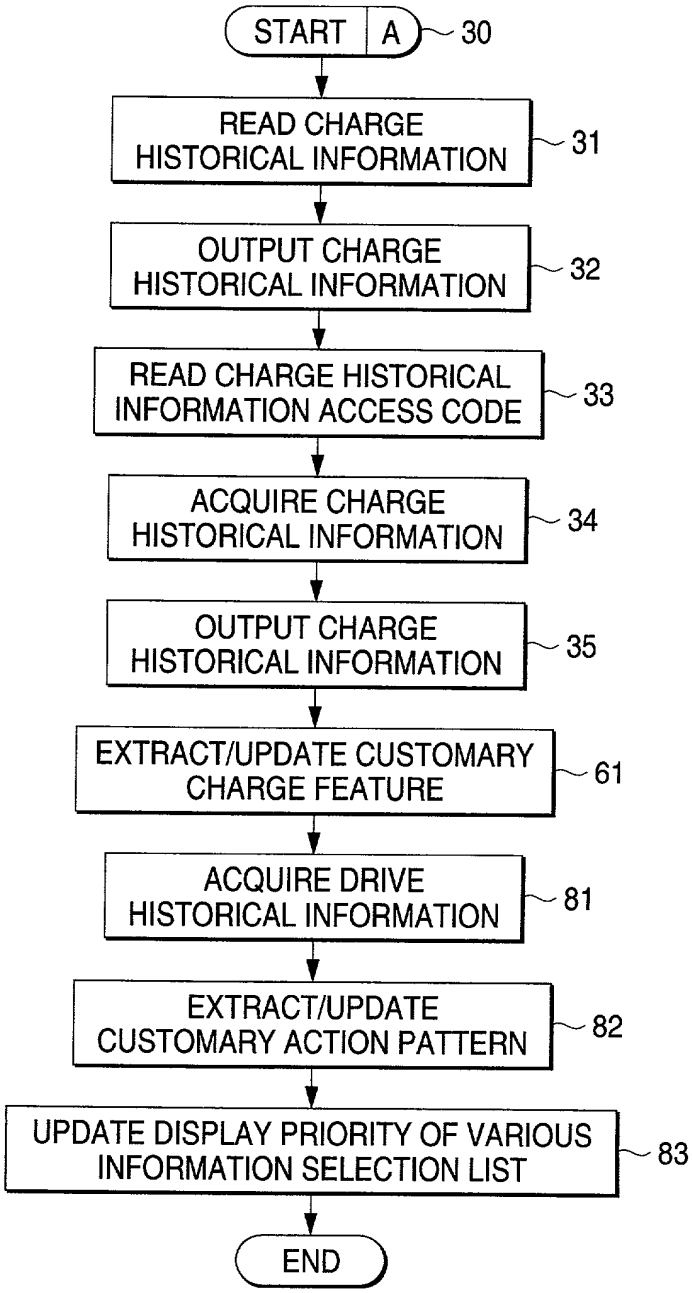

START
A
30
READ CHARGE HISTORICAL INFORMATION
31
OUTPUT CHARGE HISTORICAL INFORMATION
32
READ CHARGE HISTORICAL INFORMATION ACCESS CODE
33
ACQUIRE CHARGE HISTORICAL INFORMATION
34
OUTPUT CHARGE HISTORICAL INFORMATION
35
EXTRACT/UPDATE CUSTOMARY CHARGE FEATURE
61
ACQUIRE DRIVE HISTORICAL INFORMATION
81
EXTRACT/UPDATE CUSTOMARY ACTION PATTERN
82
UPDATE DISPLAY PRIORITY OF VARIOUS INFORMATION SELECTION LIST
83
END

FIG. 9

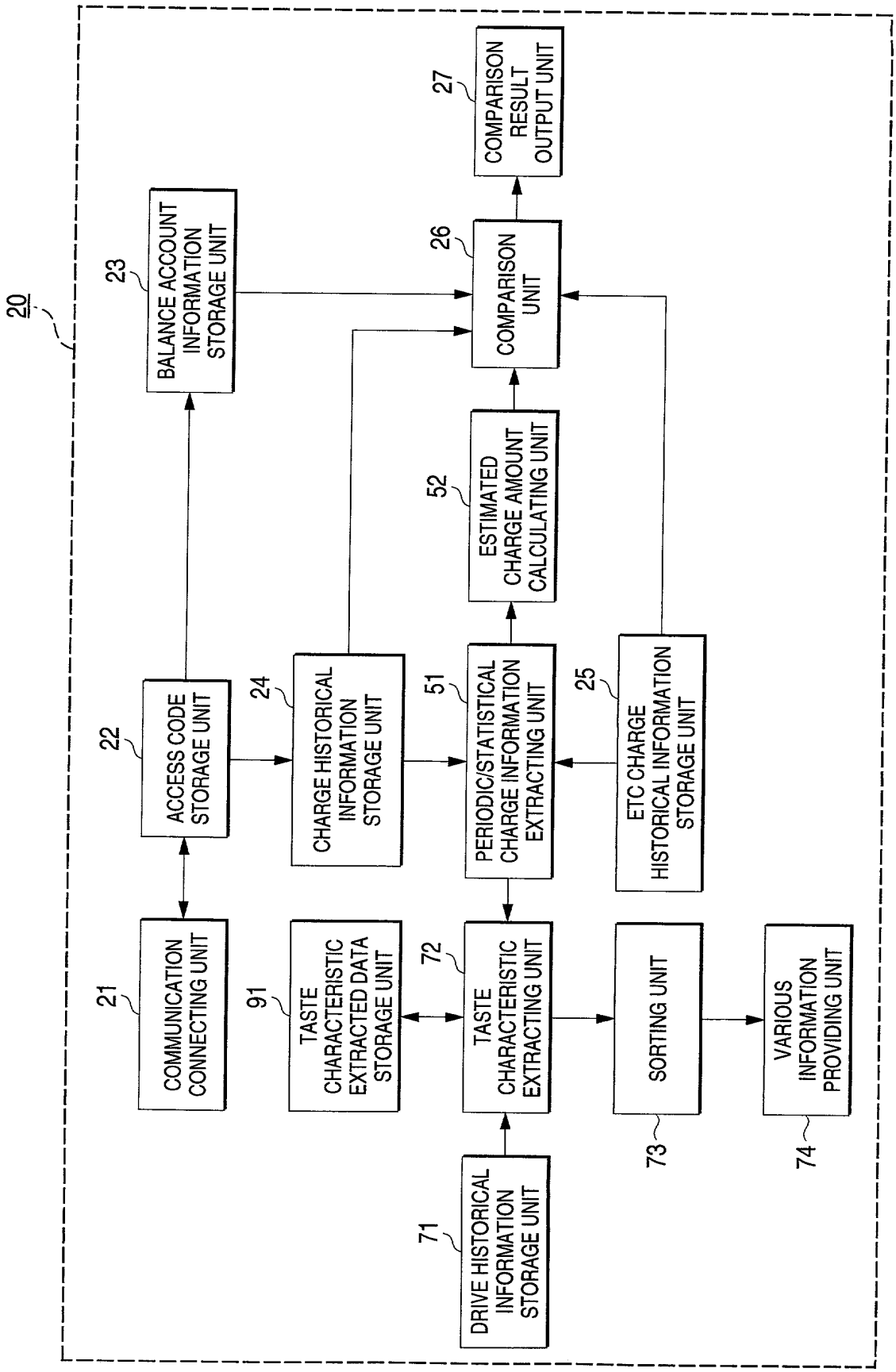

20
21
COMMUNICATION CONNECTING UNIT
22
ACCESS CODE STORAGE UNIT
23
BALANCE ACCOUNT INFORMATION STORAGE UNIT
24
CHARGE HISTORICAL INFORMATION STORAGE UNIT
25
ETC CHARGE HISTORICAL INFORMATION STORAGE UNIT
26
COMPARISON UNIT
27
COMPARISON RESULT OUTPUT UNIT
51
PERIODIC/STATISTICAL CHARGE INFORMATION EXTRACTING UNIT
52
ESTIMATED CHARGE AMOUNT CALCULATING UNIT
71
DRIVE HISTORICAL INFORMATION STORAGE UNIT
72
TASTE CHARACTERISTIC EXTRACTING UNIT
73
SORTING UNIT
74
VARIOUS INFORMATION PROVIDING UNIT
91
TASTE CHARACTERISTIC EXTRACTED DATA STORAGE UNIT

FIG. 10

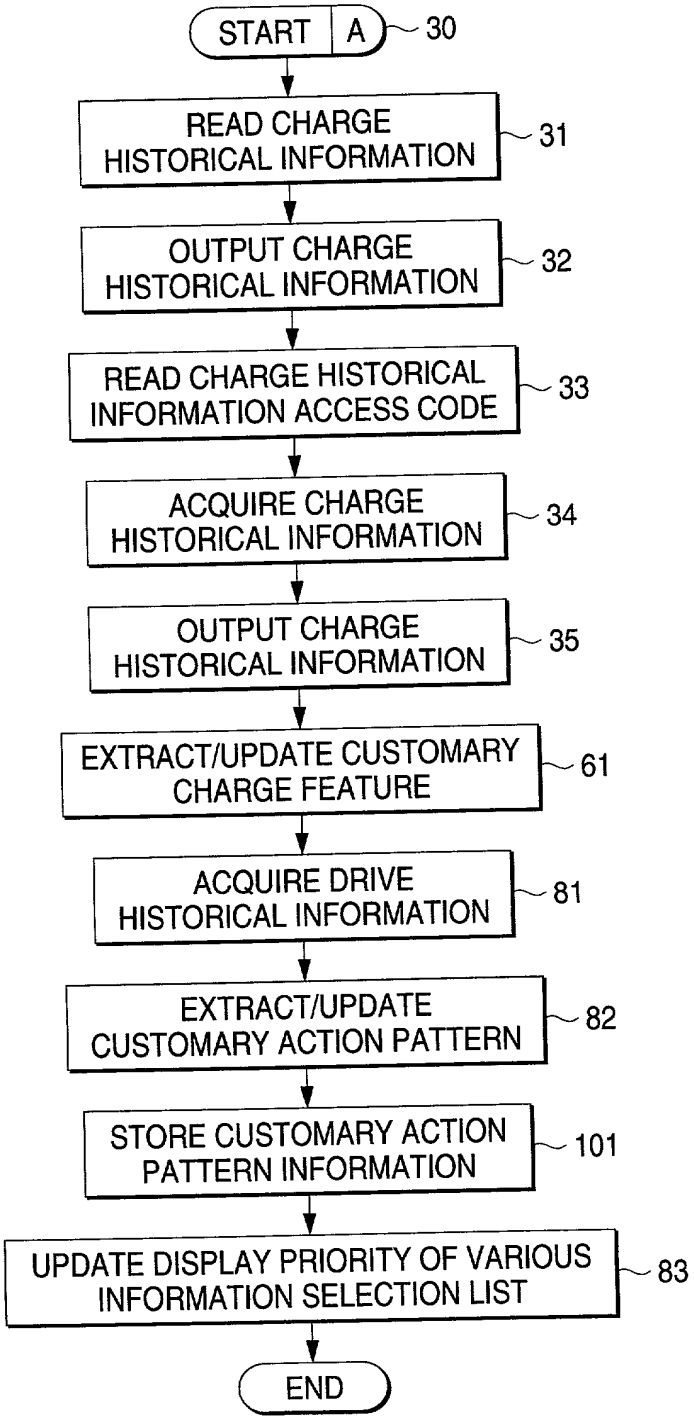

START
A
30
READ CHARGE HISTORICAL INFORMATION
31
OUTPUT CHARGE HISTORICAL INFORMATION
32
READ CHARGE HISTORICAL INFORMATION ACCESS CODE
33
ACQUIRE CHARGE HISTORICAL INFORMATION
34
OUTPUT CHARGE HISTORICAL INFORMATION
35
EXTRACT/UPDATE CUSTOMARY CHARGE FEATURE
61
ACQUIRE DRIVE HISTORICAL INFORMATION
81
EXTRACT/UPDATE CUSTOMARY ACTION PATTERN
82
STORE CUSTOMARY ACTION PATTERN INFORMATION
101
UPDATE DISPLAY PRIORITY OF VARIOUS INFORMATION SELECTION LIST
83
END

FIG. 11

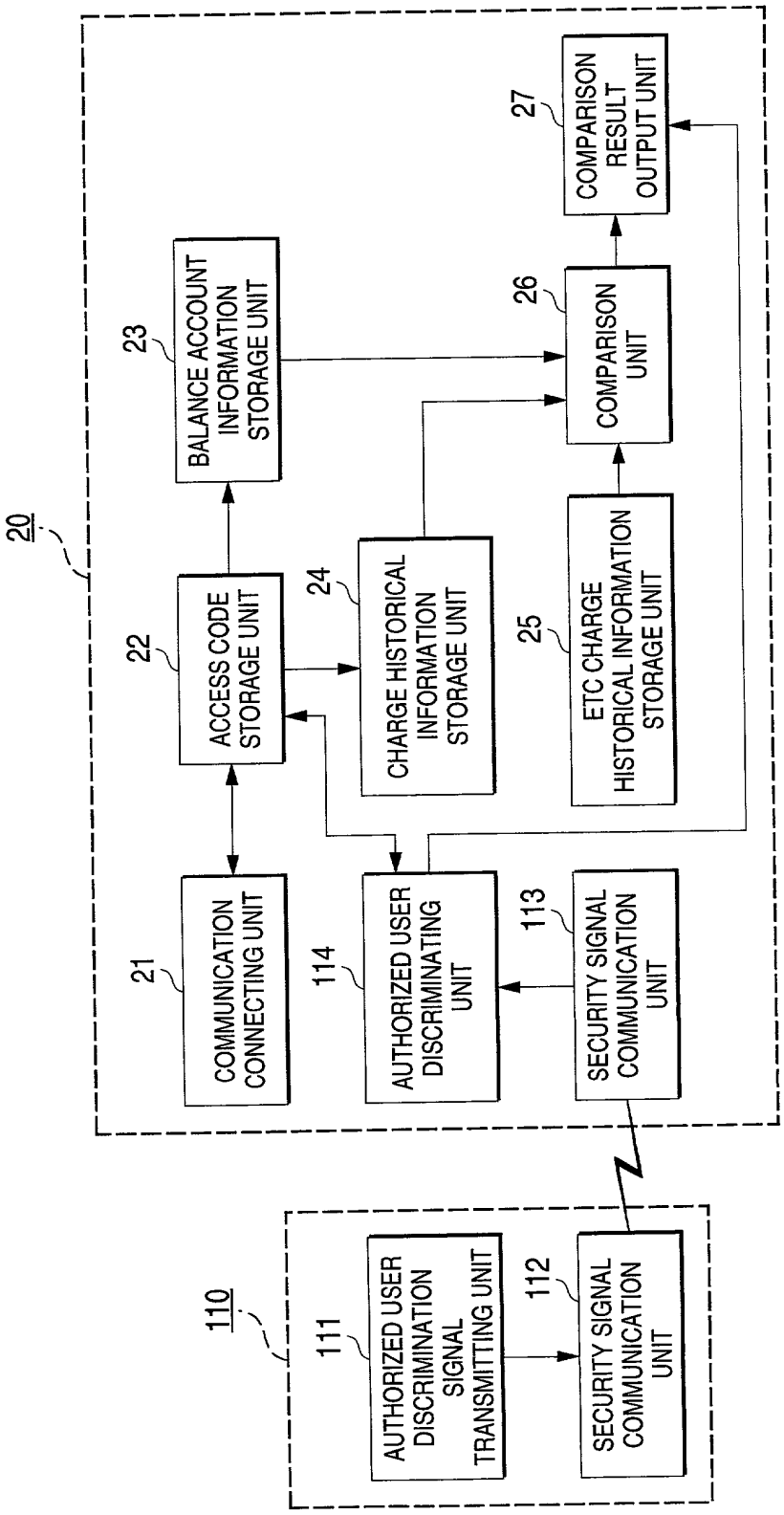

20
21
COMMUNICATION CONNECTING UNIT
22
ACCESS CODE STORAGE UNIT
23
BALANCE ACCOUNT INFORMATION STORAGE UNIT
24
CHARGE HISTORICAL INFORMATION STORAGE UNIT
25
ETC CHARGE HISTORICAL INFORMATION STORAGE UNIT
26
COMPARISON UNIT
27
COMPARISON RESULT OUTPUT UNIT
114
AUTHORIZED USER DISCRIMINATING UNIT
113
SECURITY SIGNAL COMMUNICATION UNIT
110
111
AUTHORIZED USER DISCRIMINATION SIGNAL TRANSMITTING UNIT
112
SECURITY SIGNAL COMMUNICATION UNIT

FIG. 12

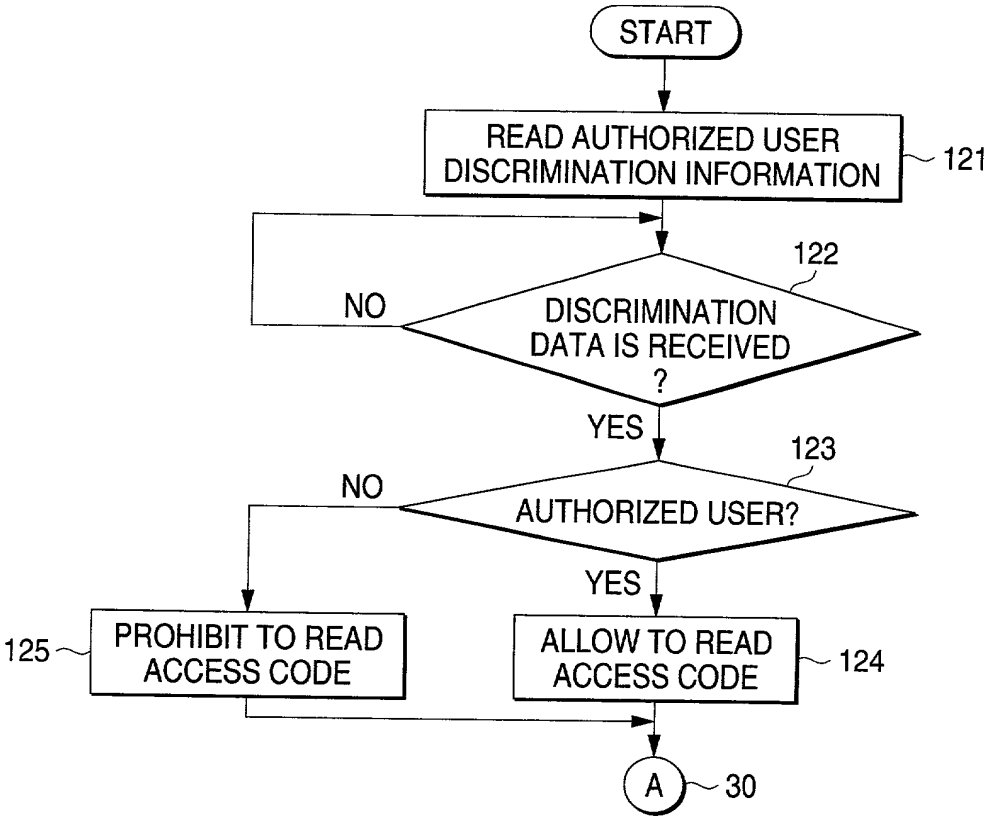

START
READ AUTHORIZED USER DISCRIMINATION INFORMATION
121
122
NO
DISCRIMINATION DATA IS RECEIVED ?
YES
123
NO
AUTHORIZED USER?
YES
125
PROHIBIT TO READ ACCESS CODE
ALLOW TO READ ACCESS CODE
124
A
30

FIG. 13

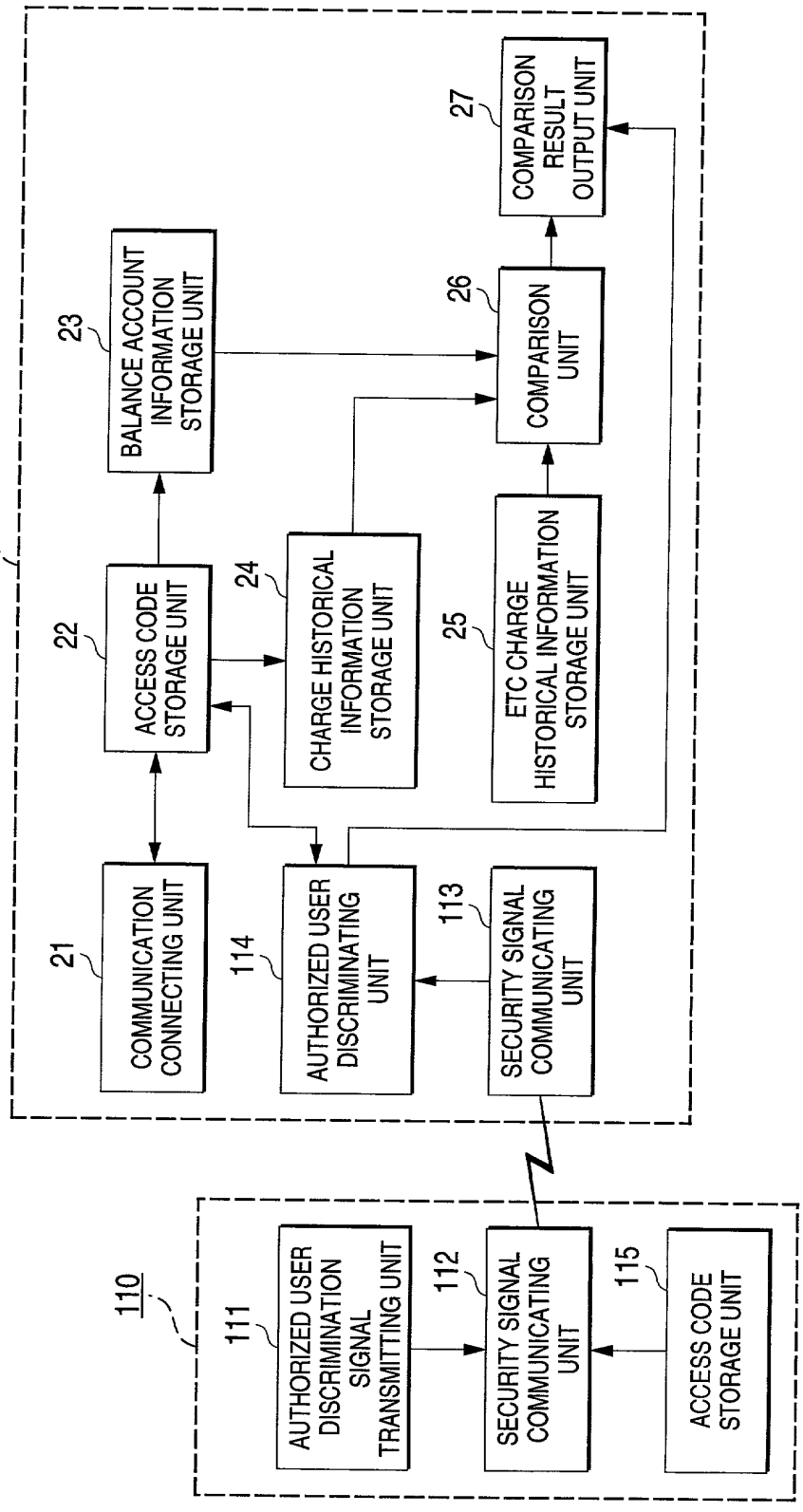

20
21
COMMUNICATION CONNECTING UNIT
22
ACCESS CODE STORAGE UNIT
23
BALANCE ACCOUNT INFORMATION STORAGE UNIT
24
CHARGE HISTORICAL INFORMATION STORAGE UNIT
25
ETC CHARGE HISTORICAL INFORMATION STORAGE UNIT
26
COMPARISON UNIT
27
COMPARISON RESULT OUTPUT UNIT
113
SECURITY SIGNAL COMMUNICATING UNIT
114
AUTHORIZED USER DISCRIMINATING UNIT
110
111
AUTHORIZED USER DISCRIMINATION SIGNAL TRANSMITTING UNIT
112
SECURITY SIGNAL COMMUNICATING UNIT
115
ACCESS CODE STORAGE UNIT

FIG. 14

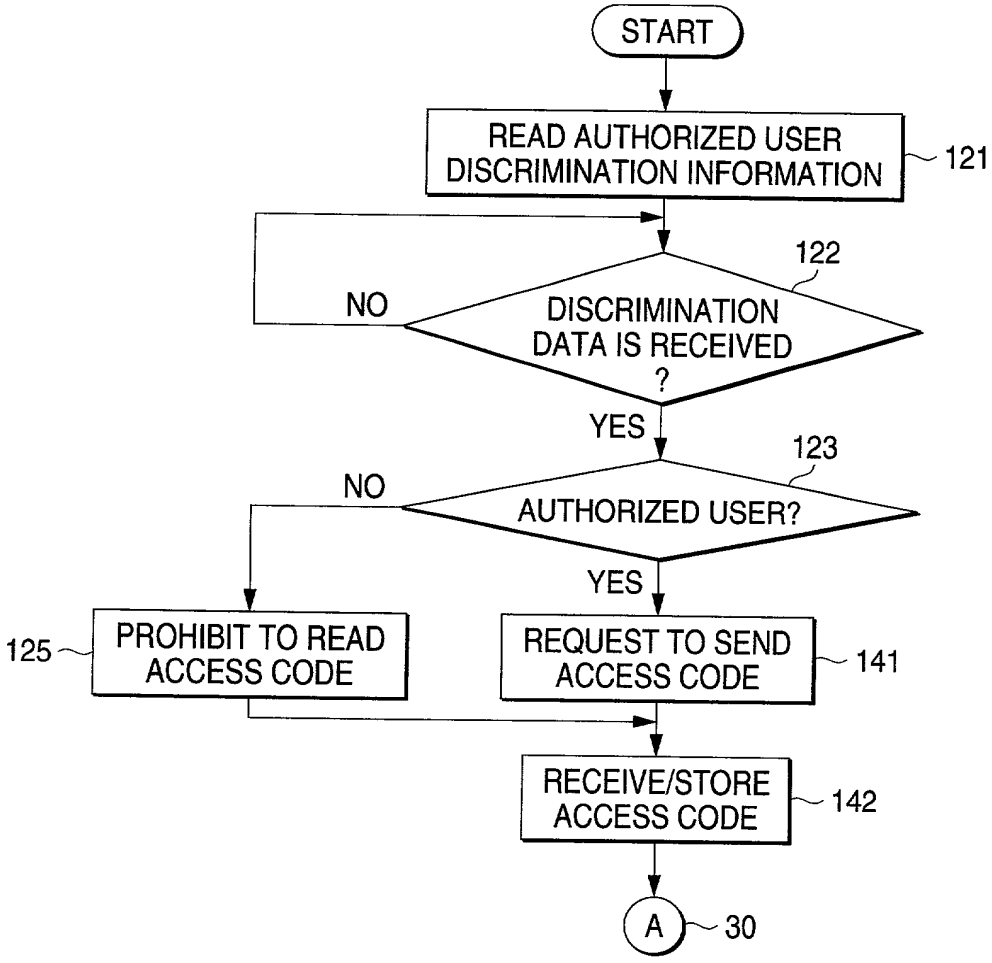

START
READ AUTHORIZED USER DISCRIMINATION INFORMATION
121
122
NO
DISCRIMINATION DATA IS RECEIVED ?
YES
123
NO
AUTHORIZED USER?
YES
125
PROHIBIT TO READ ACCESS CODE
REQUEST TO SEND ACCESS CODE
141
RECEIVE/STORE ACCESS CODE
142
A
30

FIG. 15

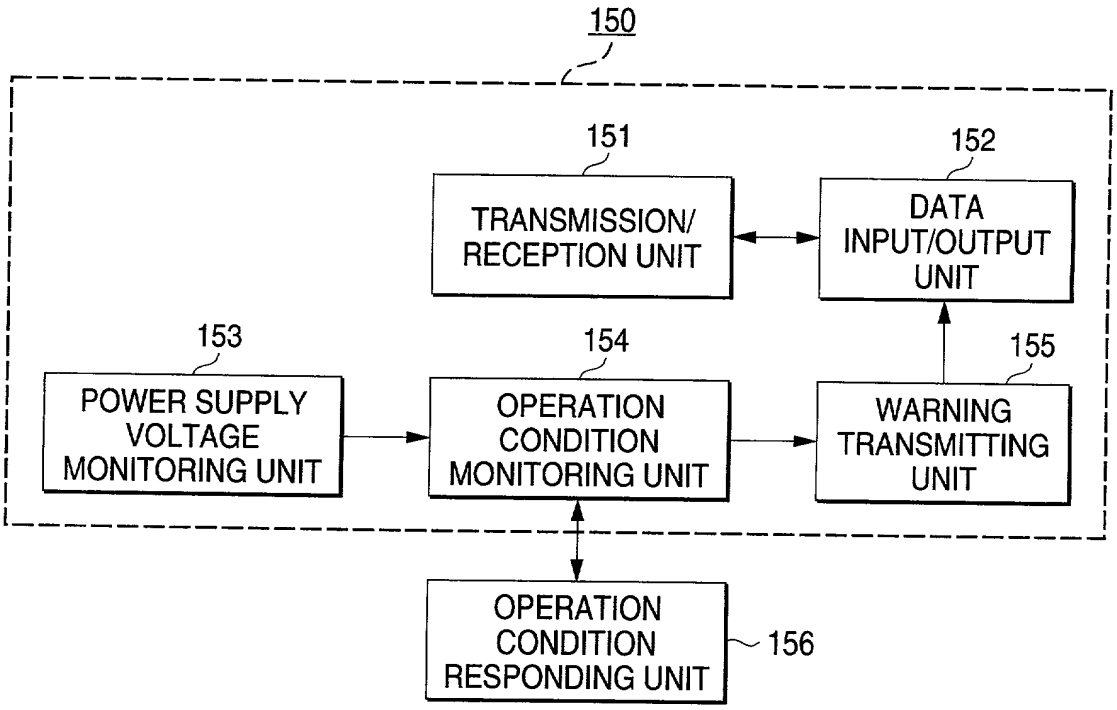

150
151
TRANSMISSION/
RECEPTION UNIT
152
DATA
INPUT/OUTPUT
UNIT
153
POWER SUPPLY
VOLTAGE
MONITORING UNIT
154
OPERATION
CONDITION
MONITORING UNIT
155
WARNING
TRANSMITTING
UNIT
OPERATION
CONDITION
RESPONDING UNIT
156

FIG. 16

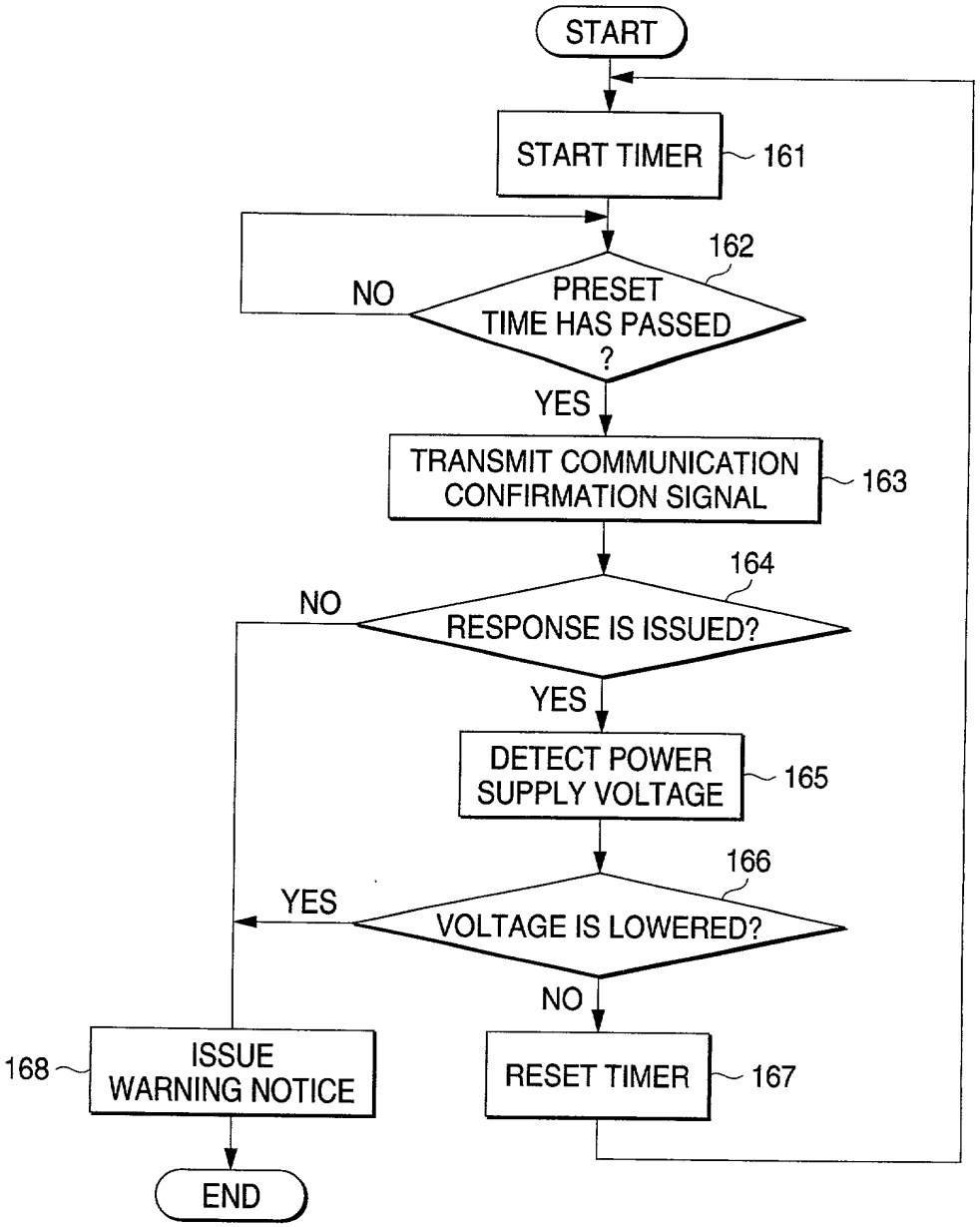

START
START TIMER
161
162
NO
PRESET TIME HAS PASSED ?
YES
TRANSMIT COMMUNICATION CONFIRMATION SIGNAL
163
164
NO
RESPONSE IS ISSUED?
YES
DETECT POWER SUPPLY VOLTAGE
165
166
YES
VOLTAGE IS LOWERED?
NO
168
ISSUE WARNING NOTICE
RESET TIMER
167
END

FIG. 17

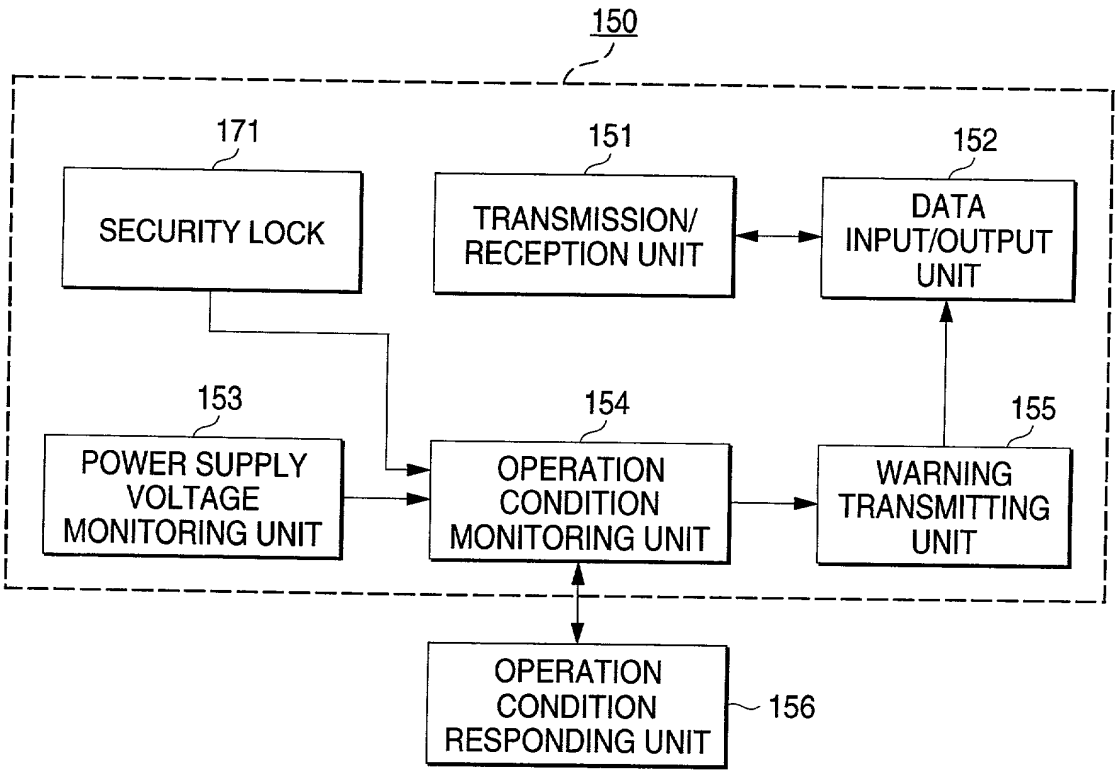

150
171
SECURITY LOCK
151
TRANSMISSION/ RECEPTION UNIT
152
DATA INPUT/OUTPUT UNIT
153
POWER SUPPLY VOLTAGE MONITORING UNIT
154
OPERATION CONDITION MONITORING UNIT
155
WARNING TRANSMITTING UNIT
OPERATION CONDITION RESPONDING UNIT
156

FIG. 18

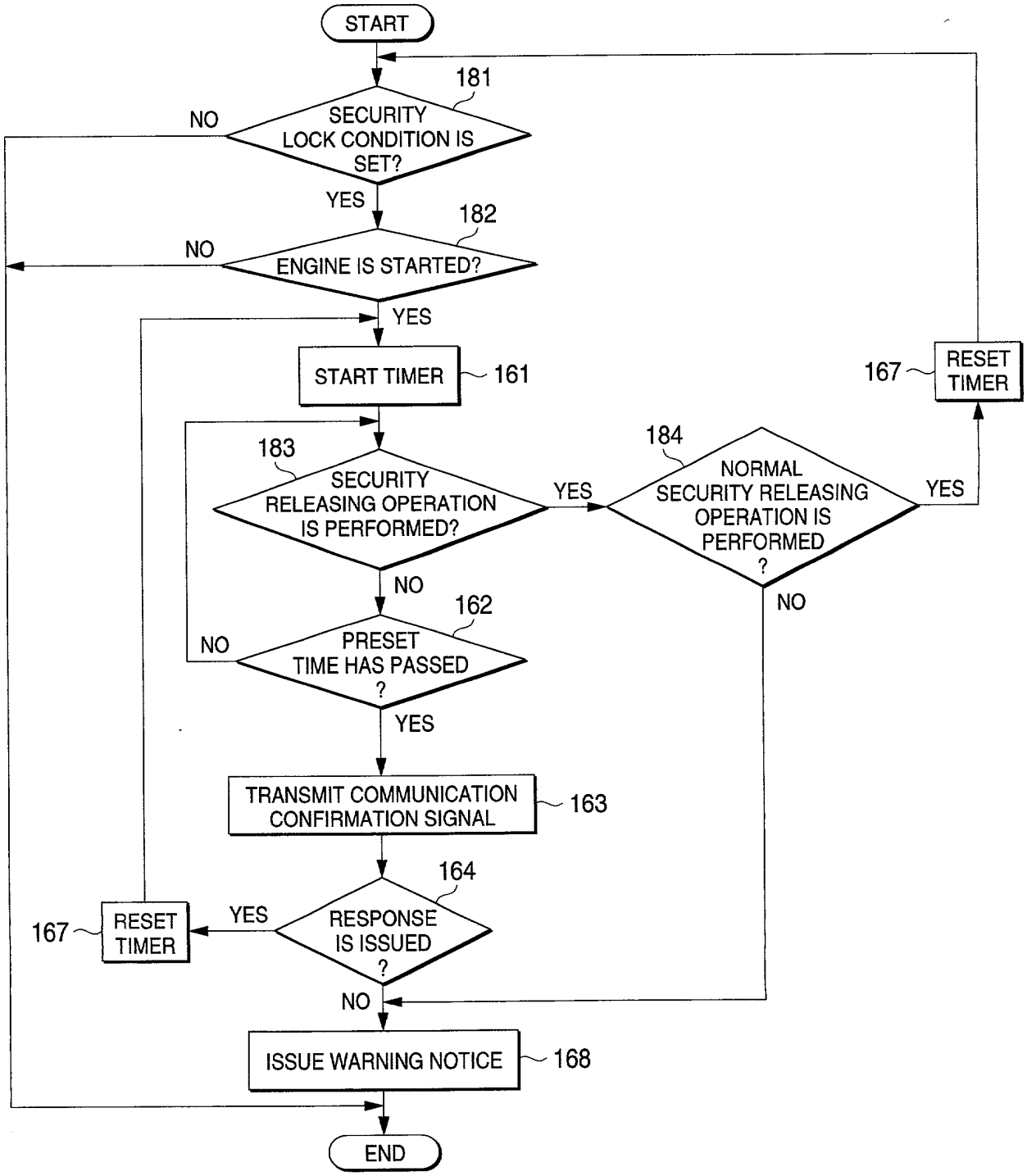

START
181
SECURITY LOCK CONDITION IS SET?
NO
YES
182
ENGINE IS STARTED?
NO
YES
START TIMER
161
183
SECURITY RELEASING OPERATION IS PERFORMED?
YES
184
NORMAL SECURITY RELEASING OPERATION IS PERFORMED ?
YES
NO
167
RESET TIMER
NO
162
PRESET TIME HAS PASSED ?
NO
YES
TRANSMIT COMMUNICATION CONFIRMATION SIGNAL
163
164
RESPONSE IS ISSUED ?
YES
167
RESET TIMER
NO
ISSUE WARNING NOTICE
168
END

FIG. 19

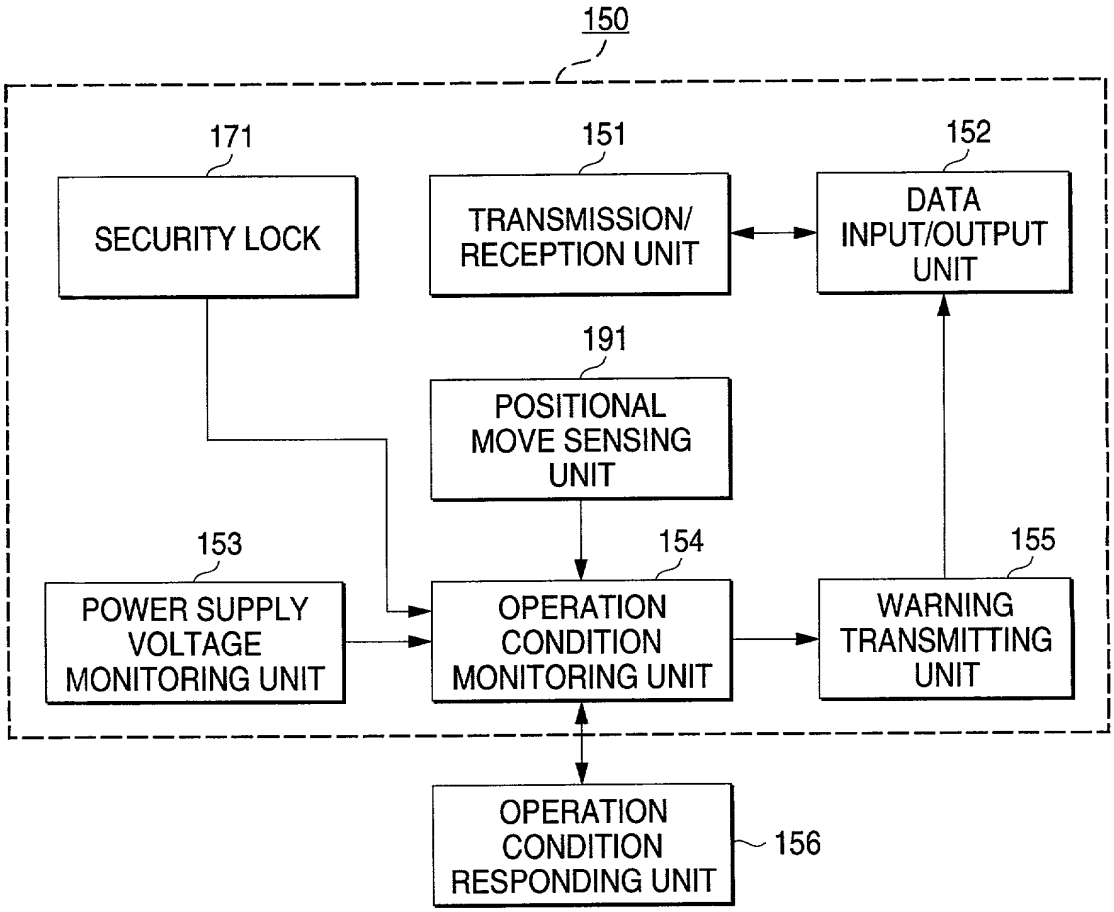

150
171
SECURITY LOCK
151
TRANSMISSION/ RECEPTION UNIT
152
DATA INPUT/OUTPUT UNIT
191
POSITIONAL MOVE SENSING UNIT
153
POWER SUPPLY VOLTAGE MONITORING UNIT
154
OPERATION CONDITION MONITORING UNIT
155
WARNING TRANSMITTING UNIT
OPERATION CONDITION RESPONDING UNIT
156

FIG. 20

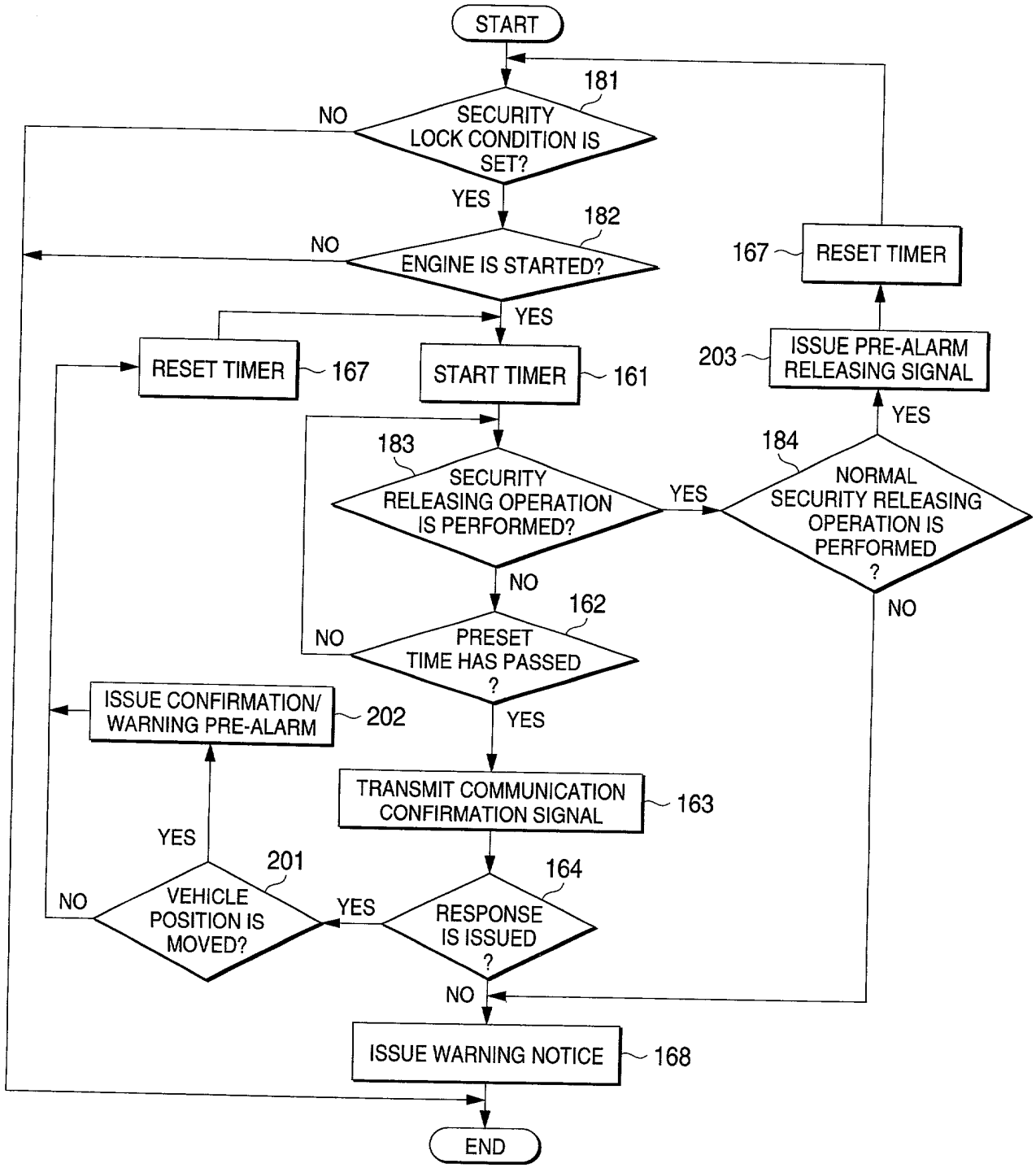
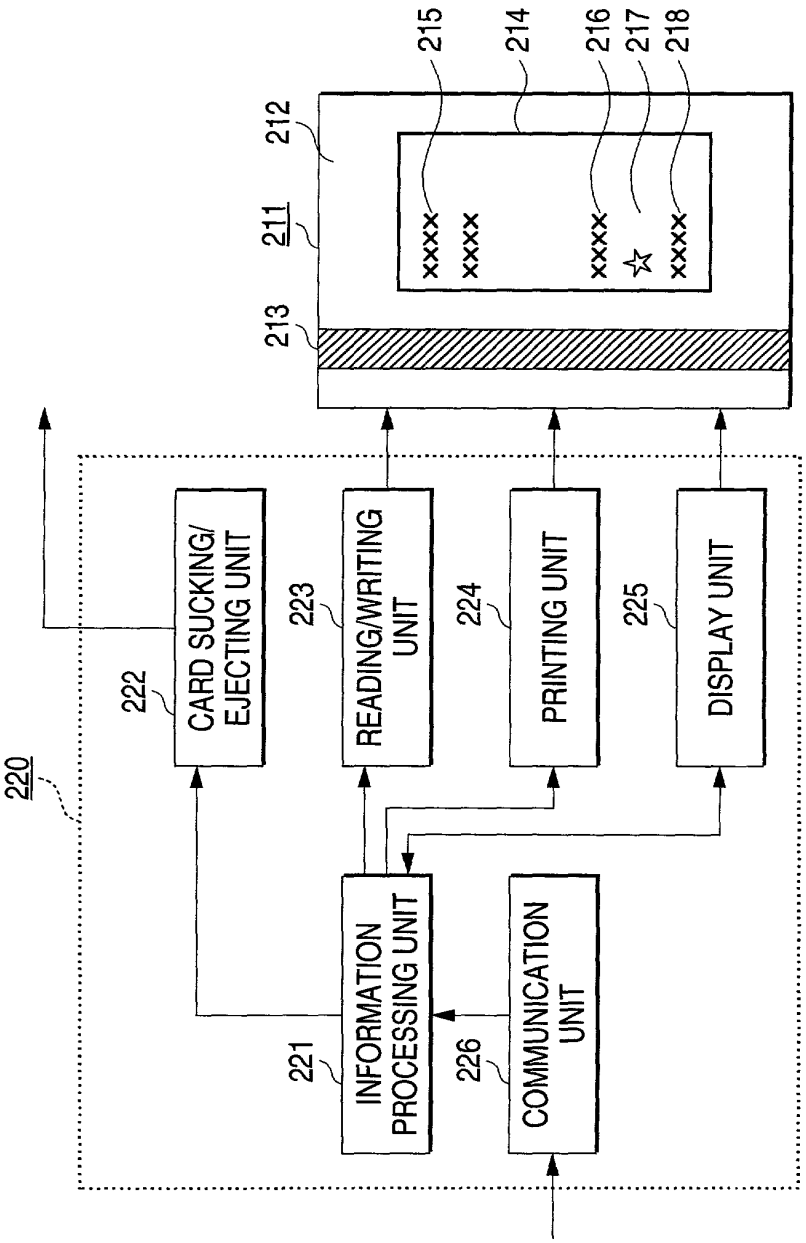

START
181
SECURITY LOCK CONDITION IS SET?
NO
YES
182
ENGINE IS STARTED?
NO
YES
RESET TIMER
167
START TIMER
161
183
SECURITY RELEASING OPERATION IS PERFORMED?
YES
NO
162
PRESET TIME HAS PASSED ?
NO
YES
ISSUE CONFIRMATION/ WARNING PRE-ALARM
202
TRANSMIT COMMUNICATION CONFIRMATION SIGNAL
163
164
RESPONSE IS ISSUED ?
YES
201
VEHICLE POSITION IS MOVED?
NO
YES
NO
ISSUE WARNING NOTICE
168
END
184
NORMAL SECURITY RELEASING OPERATION IS PERFORMED ?
YES
NO
203
ISSUE PRE-ALARM RELEASING SIGNAL
167
RESET TIMER

FIG. 21


215
214
216
217
218
212
211
213
xxxx
xxxx
xxxx
☆
xxxx
220
222
CARD SUCKING/ EJECTING UNIT
223
READING/WRITING UNIT
224
PRINTING UNIT
225
DISPLAY UNIT
221
INFORMATION PROCESSING UNIT
226
COMMUNICATION UNIT